

Application No. 10/761,868
Election dated July 12, 2004
Reply to Office Action of May 11, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (canceled)

Claim 11 (Original): A plate adapted for use in a heat and mass transfer process, said plate comprising:

a plurality of ribs, at least one of said ribs defining an aperture; and
a plurality of ligaments having a pair of sides, said ligaments spanning opposing ones of said plurality of ribs, said ribs being thicker than said ligaments.

Claim 12 (Original): The plate as recited in claim 11, wherein each of said ribs protrude from one of said pair of sides of said ligaments.

Claim 13 (Original): The plate as recited in claim 12, wherein said ribs comprise:

a plurality of perimeter ribs surrounding the plate; and
a plurality of interior ribs surrounded by said perimeter frame elements.

Claim 14 (Original): The plate as recited in claim 11, wherein said aperture is circular with a diameter of approximately 0.375 inches.

Claim 15 (Original): The plate as recited in claim 13, wherein said perimeter frame elements have a thickness of about 0.12 inches.

Claim 16 (Original): The plate as recited in claim 13, wherein said interior and perimeter ribs have a width of about 0.12 inches and 0.25 inches respectively.

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Claim 17 (Original): The plate as recited in claim 11, wherein said ligaments have a thickness of about 0.06 inches.

Claims 18-24 (canceled)

Claim 25 (Withdrawn): A method of forming a fill pack for use in a cooling tower, comprising:
placing a plurality of plates in a jig, each of said plates having an aperture;
traversing said apertures with a fixing device; and
deforming the portions of said fixing device occupying the space between said plates.

Claim 26 (Withdrawn): A method of placing a plurality of fill packs in a cooling tower, comprising:

providing a plurality of fill packs, each of said fill packs being formed from a plurality of plates having a pair of periodically recessed edges;

and placing a first of said fill packs on a second of said fill packs such that there are fewer points of contact between the fill packs than would occur if the fill plates had non-recessed edges.

Claim 27 (Withdrawn): The method of claim 26, wherein said step of placing a first of said fill packs on a second of said fill packs comprises stacking said first fill pack on said second fill pack such that said first fill pack is oriented about 90 degrees along a horizontal plane from said second fill pack.

Claim 28 (Withdrawn): A fill pack for use in a cooling tower, comprising:

a plurality of stoneware plates; and

a connecting structure for connecting said plates and forming a fill pack.

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Claim 29 (Withdrawn): A fill pack for use in a cooling tower, comprising:

a plurality of substantially planar plates, each said plate including a pair of opposing contact edges, each said contact edge having a plurality of recesses, whereby each said contact edge is discontinuous, said recesses defining a plurality of gaps along each said contact edge, said gaps along each said contact edge having a cumulative gap length along each said contact edge, each said contact edge having a cumulative contact edge length defined by a plurality of non-recessed portions of said contact edges, said cumulative contact length substantially equal to said cumulative gap length.

Claim 30 (Withdrawn): A fill pack for use in a cooling tower comprising:

a first fill pack formed of a plurality of plates, each said plate of said first fill pack having a periodically recessed edge;

a second fill pack formed of a plurality of plates, each said plate of said second fill pack having a periodically recessed edge, said plurality of plates of said second fill pack being substantially perpendicular to said plurality of plates of said first fill pack, said periodically recessed edges of said plates of said first fill pack adjacent to said periodically recessed edges of said plates of said second fill pack.